

**REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed July 9, 2003 (the "Office Action"). As of the Office Action, Claims 7-13, 20-23 and 34-37 were pending. Applicants have amended Claims 7-8, 13, 22 and 34. Reconsideration and allowance of all pending claims is respectfully requested in view of the foregoing amendments and the following remarks.

**Rejections Under 35 U.S.C. § 112**

Claims 7, 22 and 34 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention because the term "second request" is used twice in each claim regarding two separate requests. *See* Office Action, page 2. Applicants have amended Claims 7-8, 13, 22 and 34 to recite a "third request" such that "second request" is not used twice in each claim regarding two separate requests. Applicants thus respectfully request withdrawal of the rejection under 35 U.S.C. § 112.

**Rejections Under 35 U.S.C. § 102**

Claims 7, 8, 11, 22, 23, 34 and 35 are rejected under 35 U.S.C. § 102(b), as being unpatentable over U.S. Patent No. 6,037,732 issued to Alfano et al. ("*Alfano*"). Applicants respectfully traverse these rejections for the reasons stated below.

To anticipate a claim, each and every limitation must be found in a reference. In addition, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim," and "[t]he elements must be arranged as required by the claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989); *In re Bond*, 15 USPQ 2d 1566 (Fed. Cir. 1990); M.P.E.P. § 2131 (*emphasis added*).

Amended Claim 7 recites:

A method for controlling a plurality of server chassis cooling fans, comprising:

transmitting first and second requests to first and second server processing cards, respectively, to read first and second operating temperatures, respectively, measured at first and second temperature sensors, respectively;

the first and second temperature sensors being coupled with the first and second server processing cards, respectively;

receiving the first and second operating temperatures at a central processing unit;

comparing the first and second operating temperatures with first and second predetermined maximum operating temperatures, respectively;

transmitting a third request to a plurality of server chassis cooling fans to increase the speed of the server chassis cooling fans if the first operating temperature is greater than or equal to the first predetermined maximum operating temperature or the second operating temperature is greater than or equal to the second predetermined maximum operating temperature; and

wherein the first and second server processing cards and the plurality of server chassis cooling fans are disposed at least partially within a server chassis.

The Office Action states that *Alfano* discloses the concept of fan server cards controlling fan systems and "the ability to use more than one fan card, fan controller, and multiple fans as the user designing the system would see fit." *See* Office Action, page 3. *Alfano* specifically discloses that "multiple fans 130 may be controlled by a fan controller 120" and "a system may include multiple fan controllers 120 and/or thermal managers 120." *See Alfano*, col. 8, lines 60-64. However, the mere disclosure of multiple fans controlled by a fan controller does not anticipate using a single central processing unit to request respective operating temperatures from a plurality of server processing cards such that a request to increase the fan speed of a plurality of fans may be transmitted if any one of the operating temperatures is above a respective predetermined maximum. The Office Action contends that a previous argument of Applicants is moot because the claims state only a "plurality" of fans which *Alfano* discloses. *See* Office Action, page 4. While it is true that, as indicated above, *Alfano* discloses multiple fans, *Alfano* still does not disclose, teach or suggest requesting the increase of a plurality of fans if any one of the operating temperatures from a

plurality of server processing cards is above a respective predetermined maximum. As indicated above, to anticipate a claim under 35 U.S.C. § 102, "[t]he identical invention must be shown in as complete detail" as is contained in the claim. *See Richardson v. Suzuki Motor Co.* at 1920 (*emphasis added*).

Claim 7 also recites "wherein the first and second server processing cards and the plurality of server chassis cooling fans are disposed at least partially within a server chassis." The Office Action states that "[w]hile Alfano does not specifically mention the placement of the fans inside the server chassis, this is an inherent concept that is well known in the art." *See* Office Action, page 4, ¶ 5. However, to establish inherency, "the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (*emphasis in original*). The mere fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *See In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993). With respect to *Alfano*, there is no reason to conclude that the fans must be disposed at least partially within a server chassis. Therefore, *Alfano* does not disclose, teach or suggest "the first and second server processing cards and the plurality of server chassis cooling fans are disposed at least partially within a server chassis," either through inherency or otherwise.

Therefore, for at least these reasons, Applicants respectfully submit that Claim 7 is patentable over the cited art and request that the rejection of Claim 7 be withdrawn.

Independent Claims 22 and 34 were rejected for similar reasons as those used to reject Claim 7. *See* Office Action, ¶¶ 1-5. For at least the reasons discussed above with respect to Claim 7, Applicants respectfully submit that Claims 22 and 34 are patentable over the cited art and request that the rejections of Claims 22 and 34 be withdrawn.

Claims 8 and 11 depend from Claim 7, Claim 23 depends from Claim 22 and Claim 35 depends from Claim 34. Applicants thus respectfully request that the rejections of Claims

8, 11, 23 and 35 be withdrawn for at least the same reasons discussed above with respect to Claims 7, 22 and 34.

Moreover, Claim 8 recites "receiving at least a third operating temperature at the central processing unit, the third operating temperature being associated with a third temperature sensor that is coupled with a third server processing card;" "comparing the third operating temperature with a third predetermined maximum operating temperature;" and "transmitting the second request to increase the speed of the server chassis cooling fans if the third operating temperature is greater than or equal to the third predetermined maximum operating temperature." The Office Action states that the same rejections apply "as it is well known in the art [to] . . . be able to add as many server processing cards as required." See Office Action, page 4, ¶ 6. However, as stated above, to anticipate the claim, *Alfano* must disclose each and every element of the claim. What is well known in the art is not a part of the standard for anticipation. As discussed above with respect to Claim 7, *Alfano* does not disclose, teach or suggest requesting the increase of a plurality of fans if any one of the operating temperatures from a plurality of server processing cards is above a respective predetermined maximum. Moreover, *Alfano* does not disclose, teach or suggest transmitting a third request to increase the speed of a plurality of fans if a third operating temperature associated with a third temperature sensor is greater than or equal to a third predetermined maximum operating temperature. Therefore, for at least these additional reasons, Applicants respectfully submit that Claim 8 is patentable over the cited art and request that the rejection of Claim 8 be withdrawn.

**Rejections Under 35 U.S.C. § 103 - Alfano/Peters**

Claims 9, 10, 12 and 37 are rejected under 35 U.S.C. § 103(a), as being unpatentable over *Alfano* in view of U.S. Patent No. 6,470,289 issued to Peters ("*Peters*"). Applicants respectfully traverse these rejections for the reasons stated below.

In order to establish a *prima facie* case of obviousness of a claimed invention, **all** claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that

claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970) (*emphasis added*).

Claims 9, 10, 12 and 37 each depend, either directly or indirectly, from Claim 7 and therefore include each element of Claim 7. Thus, Applicants respectfully request that the rejections of Claims 9, 10, 12 and 37 be withdrawn at least because, as discussed above, the cited prior art does not disclose, teach or suggest every element of Claim 7.

Furthermore, the Office Action fails to cite any motivation to combine *Peters* and *Alfano* as is required to maintain an obviousness rejection under 35 U.S.C. § 103. See M.P.E.P. § 2143. To combine references to obviate a claim, the Examiner must explain the specific understanding or principle within the knowledge of the skilled artisan that would motivate the combination. See *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Applicants thus additionally request that the rejections of Claims 9, 10, 12 and 37 be withdrawn.

Moreover, Claim 9 recites "wherein at least two of the first, second and third predetermined maximum operating temperatures are equal," and Claim 37 recites "wherein the first predetermined maximum operating temperature is equal to the second predetermined maximum operating temperature." The Office Action states that "this is a user decision, and while not mentioned specifically in *Peters*, these ranges are individually set and could obviously be set to equal values." See Office Action, ¶ 10. Thus, the Office Action specifically states that the cited art does not disclose, teach or suggest the elements of Claims 9 and 37. As indicated above, in order to obviate a claim, **all** claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974). The mere fact that particular predetermined maximum operating temperatures could be set to equal values does not provide the necessary disclosure of the elements of Claims 9 and 37. Therefore, for at least these additional reasons, Applicants respectfully request that the rejections of Claims 9 and 37 be withdrawn.

Furthermore, Claim 10 recites wherein the first request is transmitted over a PCI bus. The portion of *Peters* cited by the Office Action as disclosing this element states that "an interface card such as a peripheral component interconnect ("PCI") card or PCMCIA card may become hot from use and its heat radiates to the CPU 102, which in turn becomes warm." See *Peters*, col. 7, lines 27-31; Office Action, ¶ 11. However, this portion of *Peters* merely discloses a PCI card that radiates heat and does not disclose transmitting a first request over a PCI bus to read a first operating temperature. The Office Action has not cited any portion of *Peters* or *Alfano* as disclosing, nor does the cited art disclose, teach or suggest, transmitting a first request over a PCI bus to read a first operating temperature. Therefore, for at least this additional reason, Applicants respectfully request that the rejection of Claim 10 be withdrawn.

**Rejections Under 35 U.S.C. § 103 - Alfano/Stancil**

Claim 13 is rejected under 35 U.S.C. § 103(a), as being unpatentable over *Alfano* in view of U.S. Patent No. 6,065,081 issued to Stancil et al. ("*Stancil*"). Applicants respectfully traverse this rejection for the reasons stated below.

Claim 13 depends from Claim 7 and therefore includes each element of Claim 7. Thus, Applicants respectfully request that the rejection of Claims 13 be withdrawn because, as discussed above, the cited prior art does not disclose, teach or suggest every element of Claim 7.

Moreover, Claim 13 recites wherein the third request comprises a GPIO signal. *Stancil* discloses a mechanism consisting of a GPIO signal for controlling slot-specific configuration select or reset signals. See *Stancil*, col. 2, line 65 - col. 3, line 9. Thus, *Stancil* discloses use of a GPIO signal for a purpose unrelated to a request to increase the speed of a server chassis cooling fan. Moreover, the Office Action states that "[i]t would have been obvious to one of ordinary skill in the art to use the GPIO signals of *Stancil* to move the PCI bus signals of *Peters* in view of *Alfano* because they are quickly analyzed and would be well suited for closed loop control." See Office Action, ¶ 15. However, the Federal Circuit has held that broad conclusory statements by the Examiner regarding the teaching of multiple

references, standing alone, are not "evidence." *See In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999) (*emphasis added*). Instead, the Examiner must explain the specific understanding or principle within the knowledge of the skilled artisan that would motivate the combination. *See id.* Without such independent suggestion, the art is to be considered as merely inviting unguided and speculative experimentation which is not the standard with which obviousness is determined. *See Agmen Inc. v. Chugai Pharmaceutical Co., Ltd.*, 927 F.2d 1200 (Fed. Cir. 1991). The Office Action fails to cite the specific understanding or principle within the cited art that would motivate the combination. Therefore, for at least these additional reasons Applicants respectfully request that the rejection of Claim 13 be withdrawn.

#### **Rejections Under 35 U.S.C. § 103 - Alfano**

Claims 20 and 36 are rejected under 35 U.S.C. § 103(a), as being unpatentable over *Alfano*. Applicants respectfully traverse these rejections for the reasons stated below.

Claim 20 recites "wherein each of the plurality of server chassis cooling fans is operable to increase speeds of rotation in response to a signal from any of the server processing cards indicating an operating temperature greater than or equal to a predetermined maximum operating temperature." Claim 36 recites a similar element. The Office Action states that:

[W]hen creating a cooling system for use in a server room or directly attached to the server chassis itself, the skilled artisan would have found it an obvious modification to trigger all available fans to speed up upon receipt of a message from any of the temperature sensors or fan control cards with the motivation of creating a cooler environment.

*See* Office Action, ¶ 18. However, the Office Action cites no support in the art for a plurality of server chassis cooling fans operable to increase speeds of rotation in response to a signal from any of a plurality of server processing cards indicating an operating temperature greater than or equal to a predetermined maximum operating temperature. Applicants respectfully request the Examiner to cite a prior art reference disclosing such elements. Moreover, motivation to combine references cannot be shown by the mere assertion that the combination would have been an improvement because it would have yielded the advantages of the present invention. As the Federal Circuit has held, treating an advantage as the

invention disregards the statutory requirement that the invention be viewed "as a whole." *See Jones v. Hardy*, 727 F.2d 1524, 1530 (Fed. Cir. 1984). The Examiner is required to explain the specific understanding or principle within the knowledge of the skilled artisan that would motivate the combination. *See In re Dembiczak* at 999. If the Examiner is relying on "common knowledge" or "well known" art in support of his rationale for combining the references, the Examiner is requested to produce a reference in support of his position pursuant to M.P.E.P. § 2144.03. If the Examiner is relying on personal knowledge to supply the required motivation or suggestion to combine, Applicants respectfully request that the Examiner produce an affidavit supporting such facts pursuant to M.P.E.P. § 2144.03.

Therefore, because no cited art discloses, teaches or suggests each element of Claims 20 and 36 and because there is no motivation to make the proposed modification, Applicants respectfully submit that Claims 20 and 36 are patentable over the cited art and request that the rejections of Claims 20 and 36 be withdrawn.

**Rejections Under 35 U.S.C. § 103 - Alfano/Tavallaei**

Claim 21 is rejected under 35 U.S.C. § 103(a), as being unpatentable over *Alfano* in view of U.S. Patent No. 6,101,459 issued to Tavallaei et al. ("*Tavallaei*"). Applicants respectfully traverse this rejection for the reasons stated below.

Claim 21 depends from Claim 20 and therefore includes each element of Claim 20. Thus, Applicants respectfully request that the rejection of Claim 21 be withdrawn because, as discussed above with respect to Claim 20, no cited art discloses, teaches or suggests each element and because there is no motivation to make the proposed modification in the rejection of Claim 20.

Moreover, the Office Action states that "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to use the expansion capability of Tavallaei in the fan cooling system of Alfano because the ability to expand without changing hardware in the future is important to the cost structure of a cooling system." *See Office*



Action, ¶ 22. As stated above however, broad conclusory statements by the Examiner regarding the teaching of multiple references, standing alone, are not "evidence." *See In re Dembiczak* at 999 (*emphasis added*). Even where an invention is, as a whole, fully disclosed by a combination of prior art elements, such elements cannot be combined to defeat a patent as obvious unless the art teaches or suggests the desirability of making the claim combination. *See ASC Hospital Systems, Inc.* Without such independent suggestion, the art is to be considered as merely inviting unguided and speculative experimentation which is not the standard with which obviousness is determined. *See Agmen Inc. v. Chugai Pharmaceutical Co.* If the Examiner is relying on "common knowledge" or "well known" art in support of his rationale for combining the references, the Examiner is requested to produce a reference in support of his position pursuant to M.P.E.P. § 2144.03. If the Examiner is relying on personal knowledge to supply the required motivation or suggestion to combine, Applicants respectfully request that the Examiner produce an affidavit supporting such facts pursuant to M.P.E.P. § 2144.03.

Therefore, because there is no support in the cited art motivating the proposed combination, Applicants additionally request that the rejection of Claim 21 be withdrawn.

**CONCLUSION**

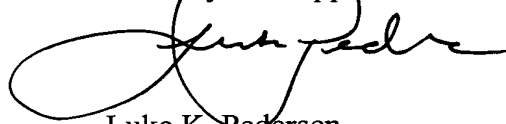
Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all pending claims.

If the Examiner feels that a telephone conference or an interview would advance prosecution of this Application in any manner, the undersigned attorney for Applicants stand ready to conduct such a conference at the convenience of the Examiner.

Applicants believe no fees are due, however, if it is determined that any fees are due, the Commissioner is hereby authorized to charge said fees or credit any overpayments to Deposit Account No. 02-0384 of BAKER BOTTS L.L.P.

Respectfully submitted,

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